UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,487	09/29/2005	Karsten Eichhorn	68897-011	3671

29493 7590 05/28/2009

HUSCH BLACKWELL SANDERS LLP
190 CARONDELET PLAZA
SUITE 600
ST. LOUIS, MO 63105-3441

EXAMINER	
SHALLENBERGER, JULIE A	
ART UNIT	**PAPER NUMBER**
2885	

MAIL DATE	DELIVERY MODE
05/28/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/551,487	EICHHORN ET AL.	
	Examiner	Art Unit	
	JULIE A. SHALLENBERGER	2885	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2000*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The amendments submitted 2/16/09 have been entered.

Claim Objections

Claim 36 is objected to because it is dependent on itself.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 25-27, 30-33, 35- 39, 41, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biebl (6,376,340) in view of Stopa (6,318,806).

In regard to claims 25 and 45, Biebl teaches a beam pattern control plate for an LED comprising a planar luminous plate 5, said plate being opaque (aluminum/copper col. 1 lines 46-58 & col. 3 lines 33-40); a recess in said plate(figure 2), said recess having a first edge and a second edge; a luminous element chip 6 mounted in said recess of said plate, said luminous element chip being a first distance from said first edge and a second distance from said second edge of said recess (figure 2), said distances being different; said recess facing a direction of light emission, such that a beam pattern emitted by said luminous element chip has a first side having a first

luminance gradient that is produced by said first distance and a second side having a second luminance gradient that is produced by said second distance, said first luminance gradient being steeper than said second luminance gradient (col. 4 lines 5-10), but lacks the teaching of a lens arranged in a beam path of the light beam emitted by the luminous plate.

Stopa teaches a lens 42 (col. 5 lines 4-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the lens of Stopa in Biebl's device in order to modify the beam such that may be more focused on a target area. One would have been motivated to use a lens in order to concentrate light on a desired area to meet the specific requirements of a particular design application.

In regard to claim 26, Biebl teaches said first distance (right side – figure 2) is shorter than said second distance (left side), thereby producing a said first luminance gradient that is steeper than said second luminance gradient (col. 4 lines 5-10).

In regard to claim 27, Biebl teaches a plurality of LEDs 6mounted in said recess (col. 4 lines 5-10).

In regard to claim 30, Biebl teaches that said recess, in plan view, has the shape of a rectangle (figure 2, col. 4 lines 5-10).

In regard to claim 31, Biebl teaches a cover that abuts the top surface of the recess, and the lens of Stopa as described above in claim 25, abuts a top surface of a plate (figure 7, col. 4 lines 54-63).

In regard to claims 32, Biebl teaches the invention described above, but lacks the teaching of an arcuate reflector, said reflector being disposed to project light emitted from said beam control plate.

Stopa teaches an arcuate reflector 10 disposed to project light emitted from a plate (col. 3 lines 50-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the arcute reflector(s) of Stopa in Biebl's light plate in order to concentrate the light on target areas. One would have been motivated to use arcuate reflector(s) in order to focus the light in desired areas in order to meet the specific requirements of various design applications.

In regard to claim 33, Biebl modified by Stopa (lens) would result in the plate of Biebl being substantially on a focal plane of the lens as is commonly employed in the art.

In regard to claims 35 and 36, Biebl and Stopa teach the invention described above but do not specifically teach a second beam control plate disposed to contribute to an overall beam emitted from a headlight ad wherein each beam pattern control plate is associated with at least one optical element selected form a curved lens and a curved reflector.

However, t would have been obvious to one of ordinary skill in the art at the time the invention was made to combine multiple beam pattern control units as taught by Biebl modified by Stopa wherein each beam pattern control unit is associated with a curved lens 42, as described above, and being capable of contributing to an overall

beam of a headlight. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use multiple beam pattern control units in order to provide more light being emitted in the forward direction. One would have been motivated to use multiple beam pattern control units in order to mazimize the brightness of light being emitted. Furthermore, the applicant is advised that it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

In regard to claim 38, Biebl teaches the invention described above, but lacks the teaching of said recess, in plan view, having a shape, and said shape includes a concavity comprising a break.

In regard to claim 37, the beam produced by Bieble is considered to be a main beam (col. 4 liens 5-10).

Stopa teaches a recess, in plan view, having a shape, and said shape includes a concavity comprising a break (figures 3,6, col. 3 lines 50-65 & col. 4 lines 56-63).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include breaks in the recess of Biebl as taught by Stopa in order to provide reflection areas to guide the light in various concentrated areas. One would have been motivated to use the recess with breaks as taught by Stopa in order to selectively illuminate projected target areas in order to meet the specific requirements of a particular design application.

In regard to claim 39, Biebl teaches a beam pattern emitted by said plate has an asymmetrical light/dark boundary (the beam pattern is considered inherent due to the positioning of the LEDs relative to the edges of the recess).

In regard to claim 41, Biebl teaches said recess is reflectively coated (col. 3 lines 33-36).

Claims 34, 43, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biebl in view of Stopa and further in view of Mizutani (5,808,592).

Biebl and Stopa teach the invention described above, as well as Stopa's lens being in the focal plane of the plate (as desriebd above), but they lack the teaching of the first distance being zero as recited in claims 34 and 43.

Mizutani teaches LED chips that substantially directly adjoin at least one edge wall (figure 3A-3C and 9B col. 6 lines 35-39 and col.8 lines 8-14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the first distance zero in order to fit more LEDs on the plate or to make the gradient more sharp. One would have been motivated to make the first distance zero in order to selectively modify the brightness (via more LEDs) or the gradient (via positioning of the LEDs relative to the edge).

In regard to claim 44, Biebl teaches the first distance being non-zero (figure 2, col. 4 lines 5-10).

Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biebl in view of Stopa and further in view of Sorg (2002/0057057).

Biebl and Stopa teach the invention described above, but lack the teaching of a translucent material that converts emitted light to white light.

Sorg teaches a recess filled with translucent light converting material whereby light emitted from the beam is converted to white light [0017] (figure 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a light converting material as taught by Sorg in order to use blue or UV LEDs to emit white light. One would have been motivated to use light converting material in order to use lower cost LEDs (blue/UV) or readily available LEDs for emitting white light.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Biebl in view of Stopa and further in view of Hohn (6,613,247).

Bieble and Stopa teach the invention descriebd above, but lack the teaching of the recess being filled with a casting material wherein the recess is filled to a level substantially coplanar with a top of the plate.

Hohn teaches a casting material 5 in recess 9 wherein the material fills the recess such that its coplanar with the top of plate 8 (co. 6 lines 8-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use casing material as taught by Hohn in order to protect the LEDs or to provide color converting material. One would have been motivated to use a

casting material with LEDs in order to selectively alter the light emission.

.

Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Biebl in view of Stopa and further in view of Martineau (2002/0105801).

Biebl and Stopa teach the invention described above but lack the teaching of a housing wherein the beam pattern control plate and lens is mounted in the housing.

Martineau teaches an LED plate and lens mounted in a housing 10 [0020].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to mount the beam pattern control unit with a lens in a housing as taught by Martineau in order to provide protection and mounting means for the light device. One would have been motivated to use the housing of Martieau in order to use Beibl's light device for a signal light.

Response to Arguments

Applicant's arguments filed 2/19/09 have been fully considered but they are not persuasive.

In response to applicant's arguments that Biebl fails to disclose individually, or suggest in combination a first luminance gradient that is produced by said first distance and a second side having a second luminance gradient that is produced by said second distance, said first luminance gradient being steeper than said second luminance gradient. Biebl teaches a beam pattern control plate for an LED comprising a planar luminous plate 5, said plate being opaque (aluminum/copper col. 1 lines 46-58 & col. 3

lines 33-40); a recess in said plate(figure 2), said recess having a first edge and a second edge; a luminous element chip 6 mounted in said recess of said plate, said luminous element chip being a first distance from said first edge and a second distance from said second edge of said recess (figure 2), said distances being different; said recess facing a direction of light emission, such that a beam pattern emitted by said luminous element chip has a first side having a first luminance gradient that is produced by said first distance and a second side having a second luminance gradient that is produced by said second distance, said first luminance gradient being steeper than said second luminance gradient (col. 4 lines 5-10). The applicant is respectfully advised that where a prior art apparatus is identical or substantially identical in structure, claimed properties or functional characteristics are presumed to be inherent, and a prima facie case of either anticipation or obviousness has been established. *In re Best*, 195 USPQ 430 (CCPA 1977). See MPEP § 2112.01.

Further, the examiner would like to note that during the last interview, the examiners never reached an agreement with the applicant in regard to language that would overcome the Biebl reference. Please see the interview notes (11/12/08).

.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JULIE A. SHALLENBERGER whose telephone number is (571)272-7131. The examiner can normally be reached on Monday - Friday 830-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon-Suk (James) Lee can be reached on 571-272-7044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAS
5/22/09

/Jong-Suk (James) Lee/
Supervisory Patent Examiner, Art Unit 2885